Where are the retraction settings in Bambu Studio?

Asked 3D Content Team
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Abstract. Printer settings > Extruder > Retraction: Bambu Lab profiles ship 0.8 mm length and 0.4 mm Z hop. Per filament: Filament settings > Setting Overrides, which wins.

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1 Where are the retraction settings in Bambu Studio?

Click the edit icon next to the printer and open the Extruder page. Its Retraction group holds Length, Z hop when retract, Retraction Speed and Deretraction Speed. Bambu Lab's X1 Carbon, P1S, A1, A1 mini and H2D profiles ship 0.8 mm at 30 mm/s with a 0.4 mm Z hop. For one filament, use Filament settings > Setting Overrides.

1.1 The number

Table 1. The number

Field in Printer settings > Extruder > Retraction	Bambu Lab profile value, 0.4 mm nozzle (X1 Carbon, P1S, A1, A1 mini, H2D)	Visible with Advanced off?
Length (the retraction distance)	0.8 mm; 0 turns retraction off	Yes
Z hop when retract	0.4 mm; the field takes up to 5 mm	Yes
Z Hop Type	Auto	No
Retraction Speed	30 mm/s	No
Deretraction Speed	30 mm/s; 0 would mean the same as Retraction Speed	No
Travel distance threshold	1 mm	No
Retract when change layer	On	No
Wipe while retracting, Wipe Distance	On, 2 mm	No
Z hop upper boundary	249 mm on the X1 Carbon and P1S, 255 mm on the A1, 179 mm on the A1 mini, 319 mm on the H2D	No

Values come from the 0.4 mm nozzle printer profiles in Bambu Studio 2.8.2.61 (August 2026). The X1 Carbon, P1S and H2D profiles set them directly; the A1 and A1 mini set only the upper boundary and inherit the rest from Bambu's shared base profiles. Labels, limits and the Advanced column come from the same release's source code.

1.2 Why is retraction in the printer settings, not the process settings?

Because both moves belong to the toolhead. Retraction is the extruder's gears pulling filament back out of the hotend before a travel move, which lowers the pressure in the melt so the nozzle stops oozing (what retraction is). Z hop lifts the nozzle so it clears the print while it travels.

Some materials string more than others, so each filament preset can override the printer's values. OrcaSlicer's wiki names PETG and TPU as more prone to stringing than PLA or ABS.

1.3 How do you change the retraction settings on a Bambu Lab printer?

1. Click the edit icon beside the printer in the sidebar (its tooltip reads "Click to edit preset"). The Printer settings window opens.
2. Turn on the Advanced switch at the top of the window. With it off you see only Length and Z hop when retract.
3. Open the Extruder page. The H2D has two, Left Extruder and Right Extruder, each with its own Retraction group.
4. Change the value and click the save icon. Bambu Studio will not overwrite a Bambu Lab system preset, so it offers to save a user preset named after the printer with " - Copy" added and selects the copy.

Set Length to 0 and Bambu Studio greys out Z hop, both speeds and the wipe fields, since nothing retracts.

1.4 Where is Z hop in Bambu Studio?

In the same Retraction group. Z hop when retract is the lift height, 0.4 mm on Bambu Lab profiles. Z Hop Type picks the path (Auto, Normal, Slope or Spiral) and needs Advanced on.

Bambu's wiki says Auto uses a slope lift unless the travel would pass over an overhang, where it spirals instead, and always spirals at a layer change. Z hop lower boundary and Z hop upper boundary limit the heights where it applies.

1.5 How do you set per-filament retraction settings?

1. Click the edit icon next to the filament in the sidebar and choose Edit.

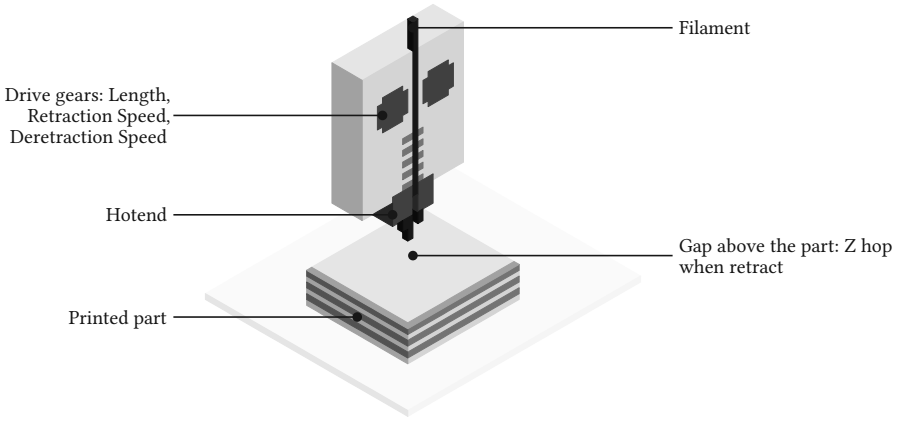


Figure 1. Length and the two speeds set what the drive gears do to the filament, and Z hop when retract sets how far the nozzle rises above the part.

2. Open the Setting Overrides page and find its Retraction group. Length and Z hop when retract show at once; the speeds and Z Hop Type need Advanced on.
3. Tick the box in front of a field and type the value. An unticked field shows N/A and uses the printer value.
4. Save the filament preset, as a copy if it is a Bambu Lab one.

A ticked override wins: when it slices, Bambu Studio swaps in the filament's value for everything printed in that material.

Some Bambu presets already use this. Bambu PETG Basic for the A1 ships Length 0.4 mm, Z Hop Type Spiral and wipe on with a 1 mm Wipe Distance. An A1 printing it pulls back 0.4 mm, not the printer's 0.8 mm. Check this page before you edit the printer value.

On these five printers the page also holds Long retraction when cut(experimental) and Retraction distance when cut, a separate, longer pull-back before the filament is cut during a material change (retraction distance when cut).

2 Where are the retraction settings in OrcaSlicer?

In the same two places as Bambu Studio. OrcaSlicer 2.4.2′s Printer settings > Extruder page holds a Retraction group (Length, Retraction speed and Deretraction speed) and a separate Z-Hop group (Z-hop height and Z-hop type). Per-filament values go in Material settings > Setting Overrides. OrcaSlicer's Bambu Lab profiles ship the same 0.8 mm length and 0.4 mm Z hop.

2.1 What is different in OrcaSlicer?

Table 2. What is different in OrcaSlicer?

What	Bambu Studio 2.8.2	OrcaSlicer 2.4.2
Length and both speeds	Printer settings > Extruder > Retraction	Printer settings > Extruder > Retraction
Z hop height and type	Same Retraction group: Z hop when retract, Z Hop Type	Own Z-Hop group: Z-hop height, Z-hop type, plus Traveling angle and On surfaces
Per-filament window	Filament settings	Material settings
An unticked override field shows	N/A	The printer's value, greyed out
Z hop limits and On surfaces per filament	Not on Setting Overrides	On Setting Overrides
Fields hidden by default	Shown by the Advanced switch	Shown by a three-dot switch: Simple, Advanced and Expert settings; the speeds and Z-hop type need Advanced
Edit icon beside the printer	Always visible	Appears when you hover over the printer

The OrcaSlicer column comes from its 2.4.2 source code and English strings, and from its wiki pages on retraction, Z hop and setting overrides. Its Bambu Lab printer profiles carry the same Length, speeds, Z hop height and Z hop type as Bambu Studio's.

2.2 How to check it on your own print

1. **Find the value that applies.** Open each filament's Setting Overrides page. A ticked field replaces the printer's Extruder page value for that filament.
2. **Test before you change it.** Print a retraction test and read it as described in how to calibrate retraction distance. OrcaSlicer has it under Calibration > Retraction. Bambu Studio shows its Calibration menu, with Retraction test, only for third-party printers unless you tick Develop mode in Preferences.
3. **Put the result on the filament,** not the printer, so other filaments keep their values.

4. **Dry the spool if it strings at every setting.** Bambu's wiki says damp filament strings and oozes more, and retraction alone usually will not fix it (how to tell if filament is wet).
5. **Back off if you see gaps.** Bambu's wiki warns that too much retraction causes under-extrusion, gaps between layers and sometimes a clogged extruder.

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